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Teaching Practice Research on First Aid Courses in Higher Vocational Colleges Based on STEAM Concept

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Abstract

As one of the important components in the field of education and teaching in China, the development of higher vocational education can help students further realize the learning and mastery of vocational knowledge. It has cultivated a large number of outstanding vocational talents for multiple fields in China. Based on this, under the guidance of teaching reform, teachers have analyzed and examined the teaching work of higher vocational courses, hoping to effectively promote the diversified development of education and teaching. In this paper, from the perspective of higher vocational teachers, the author has sorted out and studied the teaching practice of first aid courses in higher vocational colleges based on the STEAM concept through a large number of practices, aiming to provide reference for the subsequent development of teaching work.

Keywords

Higher vocational education; STEAM concept; First aid courses; Teaching practice.

1. Introduction

In today's rapidly developing society, the importance of education is increasingly prominent. Higher vocational education, as an important position for cultivating applied talents, shoulders the heavy responsibility of providing talents with professional skills and practical abilities for society. [1] With the continuous promotion and deepening of teaching reform, traditional teaching models and methods have gradually exposed some problems and are difficult to meet the needs of talent cultivation in the new era. [2] As an innovative educational concept, the STEAM concept emphasizes interdisciplinary integration and focuses on cultivating students' comprehensive qualities and innovation abilities. Introducing the STEAM concept into the teaching of higher vocational first aid courses has important practical significance and value. [3]

2. Connotation and Value of the STEAM Concept

2.1. Connotation of the STEAM Concept

The STEAM concept is composed of the initials of the five disciplinary fields of science, technology, engineering, art, and mathematics. This concept advocates that when teachers carry out teaching activities, they should break disciplinary boundaries, organically integrate the five disciplines, and guide students to analyze and solve problems from multiple angles. Through interdisciplinary learning and practice, students' innovative thinking, practical ability, cooperation spirit, and comprehensive quality are cultivated. [4]

2.2. Value of the STEAM Concept

1. Cultivating students' comprehensive qualities

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The STEAM concept focuses on disciplinary integration, enabling students to be exposed to knowledge and skills in different fields during the learning process, broadening students' horizons and cultivating students' comprehensive qualities. For example, in first aid courses, students not only need to master medical scientific knowledge but also need to understand relevant aspects such as technical equipment, engineering design, artistic aesthetics, and mathematical calculations, thereby improving students' comprehensive analysis and problem-solving abilities.

2. Stimulating students' innovation ability

Interdisciplinary learning and practice can stimulate students' innovative thinking and let students generate new ideas and creativity in the collision of different disciplines. In first aid course teaching, teachers can guide students to use multidisciplinary knowledge such as science, technology, engineering, art, and mathematics to design and improve first aid equipment, formulate first aid plans, etc., and cultivate students' innovation ability.

3. Improving students' practical ability

The STEAM concept emphasizes practical operation. Through project-based learning, experimental exploration, and other methods, students can master knowledge and skills in actual operations. In higher vocational first aid courses, students can improve their practical ability and ability to respond to emergencies by simulating first aid scenes and actually operating first aid equipment.

4. Promoting integration and communication between disciplines

The STEAM concept breaks the boundaries between disciplines and promotes integration and communication between different disciplines. In first aid course teaching, teachers can invite teachers of different disciplines to participate in teaching or organize students to carry out interdisciplinary cooperative learning, so that students can better understand and master knowledge in communication and cooperation.

3. The Current Status of the Infiltration of the STEAM Concept in Higher Vocational First Aid Course Teaching

3.1. Teachers' teaching concepts are relatively traditional, which is not conducive to the development of teacher-student communication.

During the implementation of higher vocational first aid course teaching, some teachers' teaching concepts are relatively traditional. They still take teachers as the center, focus on imparting knowledge, and ignore students' subjective status and individual differences. This traditional teaching concept makes teachers often the indoctrinators of knowledge in the teaching process, while students become passive recipients. This leads to teachers' relatively one-sided understanding of the STEAM concept, not fully realizing the importance of interdisciplinary integration and not fully paying attention to the teaching value of student groups.

Affected by the above factors, teachers lack communication and interaction with students in classroom teaching. Under the traditional teaching model, teachers are often the leaders of the classroom, and students rarely have the opportunity to express their views and ideas. This teaching method lacking communication and interaction makes students passively accept knowledge and lack the enthusiasm for active thinking and exploration. In the learning process, students only mechanically memorize knowledge without truly understanding the connotation and application value of knowledge. This is not only not conducive to the cultivation of students' thinking and understanding abilities but also affects students' learning interests and learning effects.

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3.2. Classroom teaching models are relatively single, which is not conducive to arousing students' interests.

At present, in higher vocational first aid course teaching, when some teachers organize teaching activities in combination with the STEAM concept, they do not fully do a good job in researching and expanding teaching content and still adopt the traditional lecture-based teaching model. The classroom teaching model is relatively single. In this teaching model, teachers mainly impart knowledge to students through lectures, and students passively accept knowledge. This teaching model lacks interactivity and interest, making students feel boring during the learning process.

The single classroom teaching model weakens students' exploration interests and enthusiasm for knowledge. Under this teaching model, students often passively accept knowledge and lack the motivation for active thinking and exploration. Due to the lack of initiative and enthusiasm in learning, it is difficult for students to think and explore independently on topics proposed by teachers during classroom teaching. This is not only not conducive to the improvement of students' comprehensive qualities but also affects students' learning effects and future career development.

3.3. The content of teaching activities is poorly targeted, which is not conducive to the achievement of teaching goals.

In the process of carrying out higher vocational first aid course teaching, some teachers fail to timely analyze and reflect on the implementation of teaching activities when organizing teaching work around the STEAM concept. This makes teachers lack effective evaluation of teaching effects in the teaching process and cannot timely understand students' learning situations and needs.

Due to teachers' failure to timely analyze and reflect on the implementation of teaching activities, this leads to teachers being unable to fully recognize the actual demands of student groups and difficult to timely adjust and change the content of teaching activities. The content of teaching activities lacks pertinence and cannot meet students' learning needs. In the learning process, students may feel that the teaching content does not match their actual needs, thereby reducing their enthusiasm and initiative in learning. This for the achievement of expected teaching goals and affects teaching quality and effects.

4. Teaching Practice of Higher Vocational First Aid Courses Based on the STEAM Concept

4.1. Design teacher-student communication activities and encourage students to diverge their thinking around problems.

1. The importance of activity design.

In the process of guiding higher vocational students to learn first aid courses, by introducing and infiltrating the STEAM concept, teachers should actively design teacher-student teaching activities around relevant knowledge points and encourage students to think and explore in combination with specific problems. This has good promoting significance and auxiliary value for the divergence of students' thinking. Reasonably promoting the above work can help teachers further shorten the distance with students, explain and illustrate knowledge on relevant topics, improve students' learning interests and participation, and is very helpful for achieving the expected goals of education and teaching.

2. Taking the teaching of "Diabetic Emergencies" as an example.

For example, when teaching the knowledge of "Diabetic Emergencies", teachers can effectively analyze and explore the content of subsequent education and teaching work by actively

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researching and infiltrating teaching concepts. In this process, by further introducing and infiltrating scientific ideas, teachers can systematically explain relevant topics of diabetic emergencies more objectively and comprehensively. When implementing specifically, by fully extending knowledge centered on these topics, teachers can further systematically explain and illustrate the common forms of diabetic emergencies and the treatment methods for each disease around clinical practice.

In teaching activities, teachers can design some questions to guide students to think and discuss. For example, "What are the common forms of diabetic emergencies?" "How should different forms of diabetic emergencies be treated?" "In the treatment process, what roles do disciplinary knowledge such as science, technology, engineering, art, and mathematics play respectively?" Through these questions, stimulate students' thinking and let students analyze and solve problems from multiple angles. At the same time, teachers can organize students to have group discussions, so that students can share their ideas and viewpoints in communication and cooperation, and cultivate students' cooperation spirit and team consciousness.

4.2. Explore curriculum teaching resources and promote the diversified development of teaching.

1. The necessity of resource exploration.

From a global perspective, in order to further ensure the continuous improvement of the teaching practice level of higher vocational first aid courses, under the guidance of the STEAM concept, teachers should actively do a good job in fully exploring curriculum teaching resources, so as to further promote the diversified development of teaching around relevant topics. Rich teaching resources can provide students with a broader learning space and more learning opportunities, and help students better achieve a systematic understanding of effective knowledge.

2. Taking the teaching of "Electric Shock Injury" as an example.

For example, when teaching the knowledge of "Electric Shock Injury", teachers can systematically analyze and examine the content of teaching work in a timely manner, and communicate and interact with students in a timely manner around the content of electric shock injury. In this process, by further introducing and infiltrating information technology means, teachers can use network resources to systematically display different treatment methods and processes for electric shock injury. Through multimedia resources such as pictures and videos, students can more intuitively understand the hazards of electric shock injury and treatment methods, and improve students' learning effects.

At the same time, teachers can also dig out some practical cases related to electric shock injury, and let students apply the learned knowledge to solve practical problems in the process of analyzing cases. For example, teachers can show some news reports of electric shock injury accidents, let students analyze the causes of the accidents and the problems existing in the treatment process, and put forward improvement suggestions. In this way, students' practical ability and ability to analyze and solve problems are cultivated.

In addition, teachers can also invite some professionals, such as doctors, engineers, etc., to come to the school for lectures and exchanges, so that students can understand professional knowledge and skills in different fields and broaden students' horizons. At the same time, teachers can also organize students to visit some related enterprises and institutions to let students understand the production and use of first aid equipment and improve students' practical ability and professional quality.

4.3. Pay attention to students' growth and improve curriculum teaching methods according to students' learning situations.

1. The importance of paying attention to students' growth.

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In the process of organizing higher vocational students to carry out first aid course teaching in combination with the STEAM concept, in order to further promote the optimization of teaching quality, teachers should pay attention to the growth of student groups and try to adjust and improve subsequent teaching methods according to students' learning situations. Only by understanding students' learning needs and learning characteristics can more suitable teaching methods be formulated to improve teaching effects and promote the continuous improvement of the comprehensive level of teaching.

2. Taking the teaching of "Stroke" as an example.

For example, when teaching the knowledge of "Stroke", during the period of organizing teaching work around the STEAM concept, teachers should further pay attention to the performance of student groups in learning and interpreting stroke knowledge, and point out and correct students' wrong understandings and knowledge shortcomings. During the specific work, teachers can understand students' learning situations through methods such as classroom questioning, homework correction, and examinations, discover students' existing problems in a timely manner, and take corresponding measures to solve them.

At the same time, teachers can also adjust teaching progress and teaching methods according to students' learning situations. For content that students master well, the teaching progress can be appropriately accelerated to allow students to conduct deeper learning and exploration; for content that students master poorly, the teaching progress can be slowed down, and key explanations and exercises can be carried out to ensure that students can master relevant knowledge and skills.

In addition, teachers can also organize students to carry out group cooperative learning, so that students can learn from each other and help each other in cooperation and improve students' learning effects. While communicating and interacting with students, teachers can also further systematically explain the relevant first aid treatment methods and precautions for stroke, so as to help student groups optimize their professional abilities and qualities. This is of great benefit to the improvement of the teaching level of higher vocational education and the cultivation and construction of the medical workforce.

5. Conclusion

In conclusion, introducing the STEAM concept into the teaching of higher vocational first aid courses has important practical significance and value. By taking measures such as designing teacher-student communication activities, exploring curriculum teaching resources, and paying attention to students' growth, the quality and effectiveness of higher vocational first aid course teaching can be effectively improved, and students' comprehensive qualities and innovation abilities can be cultivated.

In the practical process, we also deeply realize that the application of the STEAM concept is not achieved overnight and requires teachers to continuously explore and innovate. On the one hand, teachers should continuously improve their interdisciplinary teaching ability and deeply understand the integration points of disciplines such as science, technology, engineering, art, and mathematics so as to better guide students to think and learn in multiple dimensions. On the other hand, schools should also provide corresponding support, provide necessary teaching resources and training opportunities, and encourage teachers to actively try new teaching methods and means. In the teaching process, attention should also be paid to the combination with real life, so that students can use the learned knowledge to solve problems in real situations, improve students' practical ability and ability to respond to emergencies. At the same time, cooperation with enterprises, medical institutions, etc. should be strengthened to provide students with internship and practical opportunities so that students can better understand industry needs and development trends and prepare for future career development.

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In short, although there are still some problems and challenges in the actual teaching process, as long as we keep working hard and continuously improve teaching methods and teaching content, we will definitely be able to make greater contributions to cultivating more excellent higher vocational first aid talents and cultivate more high-quality talents with innovative spirit and practical ability for China's medical cause and social development.

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